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Application Number	09/435,070		
Filing Date	November 4, 1999		
First Named Inventor	Balaram Sinharoy		
Art Unit	2124		
Examiner Name	William H. Wood		
Total Number of Pages in This Submission	10	Attorney Docket Number	AT9-98-544

ENCLOSURES (Check all that apply)

<input type="checkbox"/> Fee Transmittal Form <input type="checkbox"/> Fee Attached <input type="checkbox"/> Amendment/Reply <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Reply to Missing Parts/ Incomplete Application <input type="checkbox"/> Reply to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation <input type="checkbox"/> Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s) _____ <input type="checkbox"/> Landscape Table on CD	<input type="checkbox"/> After Allowance Communication to TC <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input checked="" type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input checked="" type="checkbox"/> Other Enclosure(s) (please Identify below): <input type="checkbox"/> Request for Reinstatement of Appeal; Change of Correspondence
<input type="checkbox"/> Remarks Supplemental Appeal Brief		

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name	Winstead Sechrest & Minick P.C.		
Signature			
Printed name	Robert A. Voigt, Jr.		
Date	December 14, 2004	Reg. No.	47,159

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- 1 -

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: : Before the Examiner:
 Balaram Sinharoy : William H. Wood

Serial No.: 09/435,070 : Group Art Unit: 2124

Filed: November 4, 1999 :
 : IBM Corporation
 : Intellectual Property Law
 : 11400 Burnet Road
 : Austin, Texas 78758

Title: CIRCUITS, SYSTEMS AND :
 METHODS FOR PERFORMING :
 BRANCH PREDICTIONS BY :
 SELECTIVELY ACCESSING :
 BIMODAL AND FETCH-BASED :
 HISTORY TABLES :
 :

REQUEST FOR REINSTATEMENT OF APPEAL

Mail Stop Appeal Brief-Patents
 Commissioner for Patents
 P.O. Box 1450
 Alexandria, VA 22313-1450

Dear Sir:

In response to the Office Action (Paper No. 18) having a mailing date of December 1, 2004, reopening prosecution of the above-referenced Application, Applicant respectfully requests reinstatement of the Appeal based on the Appeal Brief filed on August 31, 2004 and the Notice of Appeal filed on July 28, 2004.

CERTIFICATION UNDER 37 C.F.R. §1.8

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to Mail Stop Appeal Brief-Patents, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on December 14, 2004.


 Signature

Serena Beller
(Printed name of person certifying)

A supplemental appeal brief is filed herewith.

FEE DEFICIENCY

NOTE: If there is a fee deficiency and there is no authorization to charge an account, additional fees are necessary to cover the additional time consumed in making up the original deficiency. If the maximum, six-month period has expired before the deficiency is noted and corrected, the application is held abandoned. In those instances where authorization to charge is included, processing delays are encountered in returning the papers to the PTO Finance Branch in order to apply these charges prior to action on the cases. Authorization to charge the deposit account for any fee deficiency should be checked. See the Notice of April 7, 1986, 1065 O.G. 31-33.

- If any additional extension and/or fee is required, this is a request therefor and to charge Account No. 09-0447 (AT9-98-544).

AND/OR

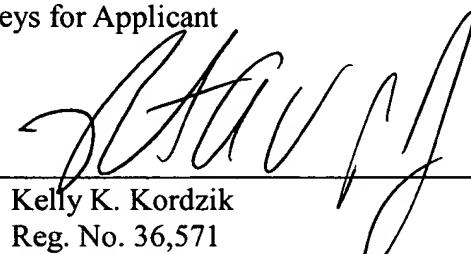
- If any additional fee for claims is required, charge Account No. 09-0447 (AT9-98-544).

Respectfully submitted,

WINSTEAD SECHREST & MINICK P.C.

Attorneys for Applicant

By: _____


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AT9-98-544

PATENT

- 1 -

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of:	:	Before the Examiner:
Balaram Sinharoy	:	William H. Wood
Serial No.: 09/435,070	:	Group Art Unit: 2124
Filed: November 4, 1999	:	
Title: CIRCUITS, SYSTEMS AND	:	IBM Corporation
METHODS FOR PERFORMING	:	Intellectual Property Law
BRANCH PREDICTIONS BY	:	11400 Burnet Road
SELECTIVELY ACCESSING	:	Austin, Texas 78758
BIMODAL AND FETCH-BASED	:	
HISTORY TABLES	:	

SUPPLEMENTAL APPEAL BRIEF

Mail Stop Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

This supplemental brief is being submitted pursuant to 37 C.F.R. §41.37.

CERTIFICATION UNDER 37 C.F.R. §1.8

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Signature

Serena Beller
(Printed name of person certifying)

I. INCORPORATION BY REFERENCE

Appellant hereby incorporates herein by reference Sections I-VI and VIII-IX of Appellant's Brief mailed on August 31, 2004.

II. NEW GROUND OF REJECTION TO BE REVIEWED ON APPEAL

Claims 10 and 30 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Patt et al. ("Alternative Implementations of Hybrid Predictors") (hereinafter "Patt") in view of Talcott et al. (U.S. Patent No. 6,289,441) (hereinafter "Talcott").

III. ADDITIONAL ARGUMENTS

The Examiner has rejected claims 10 and 30 under 35 U.S.C. §103(a) as being unpatentable over Patt in view of Talcott. Paper No. 18, page 2. Appellant respectfully traverses these rejections for at least the reasons stated below.

A. The Examiner has not provided any objective evidence for combining Patt with Talcott.

A *prima facie* showing of obviousness requires the Examiner to establish, *inter alia*, that the prior art references teach or suggest, either alone or in combination, all of the limitations of the claimed invention, and the Examiner must provide a motivation or suggestion to combine or modify the prior art reference to make the claimed inventions. M.P.E.P. §2142. The showings must be clear and particular and supported by objective evidence. *In re Lee*, 277 F.3d 1338, 1343, 61 U.S.P.Q.2d 1430, 1433-34 (Fed. Cir. 2002); *In re Kotzab*, 217 F.3d 1365, 1370, 55 U.S.P.Q.2d 1313, 1317 (Fed. Cir. 2000); *In re Dembicza*k, 50 U.S.P.Q.2d. 1614, 1617 (Fed. Cir. 1999). Broad conclusory statements regarding the teaching of multiple references, standing alone, are not evidence. *Id.*

The Examiner's motivation for modifying Patt with Talcott to have a fetch-

based accessed history table, as recited in claim 10, is "to increase branch prediction accuracy for many instructions, which is increasingly necessary for superscalar pipeline designs (Talcott: column 2, lines 3-7; column 1, lines 54-67; Patt: Abstract)." Paper No. 18, page 4. The Examiner's motivation is insufficient to support a *prima facie* case of obviousness for at least the reasons stated below.

The Examiner's motivation is not a motivation as to why one of ordinary skill in the art with the primary reference (Patt) in front of him would have been motivated to modify Patt to have a fetch-based accessed history table with the teachings of the secondary reference (Talcott). The Examiner has not provided any evidence as to why one of ordinary skill in the art would modify Patt to have a fetch-based accessed history table in order to increase branch prediction accuracy. While both Patt and Talcott discuss about increasing branch prediction accuracy, the Examiner has not provided evidence that having a fetch-based accessed history table is a means of increasing branch prediction accuracy. The Examiner must provide some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify Patt to have a fetch-based accessed history table in order to increase branch prediction accuracy. M.P.E.P. §2142. The Examiner is merely relying upon his own subjective opinion which is insufficient to support a *prima facie* case of obviousness in rejecting claim 10. *In re Lee*, 61 U.S.P.Q.2d 1430, 1434 (Fed. Cir. 2002).

Further, the Examiner's motivation for modifying Patt with Talcott "to implement a counter corresponding to each instruction in the fetch group for increased accuracy (Talcott: column 4, lines 15-18)." Paper No. 18, page 4. There is no language in either claim 10 or 30 that states implementing a counter corresponding to each instruction in a fetch group. Applicants respectfully assert that the Examiner is ignoring claim language. The Examiner must consider all words in a claim in judging the patentability of that claim against the prior art. *In re Wilson*, 424 F.2d 1382, 1385, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970); M.P.E.P. §2143.03. The

Examiner is merely relying upon his own subjective opinion in combining Patt with Talcott which is insufficient to support a *prima facie* case of obviousness in rejecting claims 10 and 30. *In re Lee*, 61 U.S.P.Q.2d 1430, 1434 (Fed. Cir. 2002).

B. The Examiner has not provided any evidence establishing inherency.

The Examiner acknowledges that Patt and Talcott do not explicitly teach that each entry in the branch history tables comprises a 1-bit counter, as recited in claims 10 and 30. Paper No. 18, page 4. The Examiner asserts that it is inherent to 2-bit counters. Paper No. 18, page 4. Appellant respectfully traverses.

The Examiner has not provided any basis in fact and/or technical reasoning to support the assertion that a 2-bit counter, as taught in Patt, inherently comprises a 1-bit counter. *Ex parte Levy*, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Inter. 1990). That is, the Examiner must provide extrinsic evidence that must make clear that a 2-bit counter, as taught in Patt, inherently comprises a 1-bit counter, and that it be so recognized for persons of ordinary skill. *In re Robertson*, 169 F.3d 743, 745, 49 U.S.P.Q.2d 1949, 1950-51 (Fed. Cir. 1999). Consequently, the Examiner has not presented a *prima facie* case of obviousness in rejecting claims 10 and 30.

Furthermore, as Appellant stated in Appellant's Appeal Brief, Appellant respectfully disagrees that a two-bit counter inherently comprises a one-bit counter.¹ The Appellant has previously addressed this assertion in detail. See e.g. Applicant's Second Rely Under 37 C.F.R. § 1.111, mailed September 5, 2003, (hereinafter, the "Applicant's Second Reply," page 5.) A two-bit counter has two output bits that are correlated. A one-bit counter has a single output bit, and two one-bit counters have two single output bits, that is the output bits are uncorrelated. The Examiner's assertion is tantamount to stating that the value "10" comprises the value "1" or,

¹ As the Appellant previously noted, this statement is similar to asserting that a bicycle "comprises" a unicycle. A bicycle is not two unicycles nor does a bicycle "teach" two unicycles because it has two wheels where a unicycle has one wheel. Similarly, a 2-bit counter does not comprise two 1-bit

equivalently, the value "0," which is contrary to common knowledge. Contrary to PTO practice, the Examiner has yet to address the substance of the Appellant's showings. *See M.P.E.P. § 707.07(f)*. This is not to say that a two-bit counter cannot be fabricated from one-bit counters and the appropriate interconnections. However, it would be appreciated by persons of ordinary skill in the art that the result is an integral device that is different than two one-bit counters, which have a different truth table than the two-bit counter. Thus, the Examiner has not presented a *prima facie* case of obviousness for rejecting claims 10 and 30. *Id.*

C. The Examiner has not provided any motivation for modifying Patt to have each entry in the branch history tables comprise a 1-bit counter.

The Examiner must provide a motivation for modifying Patt to have each entry in the branch history tables comprise a 1-bit counter, as recited in claim 10 and similarly in claim 30, from either the nature of the problem to be solved, the teachings of the prior art or the knowledge of persons of ordinary skill in the art. *In re Rouffet*, 149 F.3d 1350, 1357, 47 U.S.P.Q.2d 1453, 1457-58 (Fed. Cir. 1998); M.P.E.P. §2143. Since the Examiner has not provided such a motivation, the Examiner has not presented a *prima facie* case of obviousness in rejecting claims 10 and 30. M.P.E.P. §2143.

counters.

IV. CONCLUSION

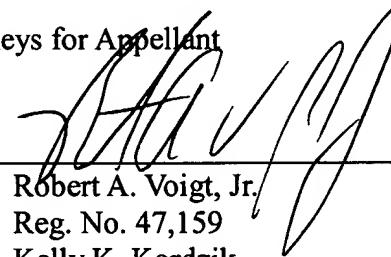
For at least the reasons stated above and in the Appeal Brief filed by Appellant on August 31, 2004, the rejections of claims 10 and 21-40 are in error. Appellant respectfully requests reversal of the rejections and allowance of claims 10 and 21-40.

Respectfully submitted,

WINSTEAD SECHREST & MINICK P.C.

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